

DPD-6060-59

28 September 1959

MEMORANDUM FOR: Colonel William Burke, Acting Chief, DPD

THROUGH : Chief, Developments Branch, DPD
Chief, Special Requirements, DPD
Chief, Operations Branch, DPD
Chief, Materiel Branch, DPD

SUBJECT : Radan in FE P2V7 Aircraft

REFERENCE : Cable to DIR from [REDACTED] (IN 18854) dtd 28 August 1959 25X1A

1. The attached cable is self-explanatory; however, there is a considerable amount of background information on the Radan, which is a doppler radar that gives airplane ground speed and drift, and is installed in all the P2V7U's. A military version of this system is the AN/APN-102.

2. The Radan, as installed, was guaranteed by the manufacturer, General Precision Laboratories (GPL), to work at altitudes as low as 500 feet. Tests at Eglin Air Force Base have shown that it will work at altitudes as low as 300 feet, which more than satisfies the manufacturer's warranty. The set of equipment, that is installed in the test P2V7, has given excellent results consistently; however, the operating altitude at Eglin has been above 300 feet and usually 500 feet or higher.

25X1A

3. The history of Radan problems in the P2V7's [REDACTED] dates back to early 1959 when a cable was received at Headquarters stating the Radan was not operating properly and the people [REDACTED] were considering removing the units from the airplanes. This jolted everyone since there was no forewarning of faulty operation. The monthly reports from GPL tech rep stationed [REDACTED] gave no indication of unusual problems. (The tech rep reports generally have been our best source of information.) 25X1A

25X1A

When the cable was received in early 1959, a decision was made to send a set of Radan equipment from Eglin test airplane, which had proven performance, to [REDACTED] and have the [REDACTED] equipment sent to the manufacturer, GPL, and thoroughly bench checked. This procedure was concurred in by the manufacturer, GPL. Before this plan was completed, word was received 25X1A

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DOCUMENT NO. [REDACTED]
NO CHANGE IN CLASS. [REDACTED]
CLASSIFIED [REDACTED]
CLASS. CHANGED TO: YS S C [REDACTED]
NEXT REVIEW DATE: [REDACTED]
AUTH: HR 70-2 [REDACTED]
DATE: [REDACTED] REVIEWER: 010456

25X1A

that [REDACTED] had discovered two (2) wires in the system that were crossed and that the proper rewiring remedied the trouble.

The attached cable is the latest in the series of events.

4. There has been a change in operational tactics. Some time ago the operational altitude was 1,500 feet above the ground; however, this has been decreased to 150 - 200 feet in order for the airplane to survive AI and ground fire.

5. If the Radan is removed (or retained in the airplane and not operating) two (2) other systems will be affected:

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a. The photo equipment is dependent upon Radan for ground speed to provide image motion compensation. This equipment is now in the [REDACTED] P2V7's. If the Radan is not operating, the photo gear will not operate.

b. The ASN-7 navigational computer, installed and now undergoing tests in the airplane at Eglin, is dependent upon Radan for ground speed and drift to operate. The ASN-7 is installed in only one airplane; however, the equipment for the other airplanes has been procured. No plans have been made for installation pending the outcome of the Eglin tests.

6. CONCLUSION

a. The Radan cannot be modified to operate at the 150 - 200 feet operational altitudes now being flown.

25X1A

b. The equipment should be removed from all P2V7's now at [REDACTED] or programmed for deployment there.

7. RECOMMENDATIONS

a. The Radan equipment be removed from [REDACTED] P2V7's. (The Group A components, i.e., brackets and wiring should be left in the airplanes.)

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b. The test of the ASN-7 now in the test airplane at Eglin should be completed but the equipment removed before the airplane is deployed to [REDACTED]

25X1A

c. Materiel should return the other ASN-7 sets that are on hand to the Air Force for credit (if possible).

d. The GPL tech rep now in place [REDACTED] remain there to maintain jammers and other equipment, as appropriate, until expiration of current contract. Materiel Branch should determine personnel requirements for jammer equipment and

25X1A

and phase in a replacement for this GPL tech rep as required.

e. No further effort should be expended on developing P2V7 photo gear since it appears doubtful that the photo system will ever be used operationally for the following reasons:

(1) Visible light is used for illumination which greatly increases the vulnerability. Based on past experience it is doubtful that the crews will consent to flying the airplanes if a visible illuminating system is used.

(2) The altitude tolerance required at the low flight levels are beyond the capability of most crews. These tolerances are on the order of $\pm 5\%$ or ± 25 feet altitude at 500 feet.

(3) Other means of photo collection are available to the Agency.

25X1A

Major,

USAF

CONCURRENCE:

25X1A

Special Requirements, DFD

Developments Branch, DFD

25X1A

25X1A

Operations Branch, DFD

Material Branch, DFD

25X1A

APPROVED:

25X1A

Acting Chief, DFD

25X1A

DPD-DD/P:amcb

Distribution:

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- 1 - Ch/Ops (W/Att)
- 1 - Ch/Mat (W/Att)
- 1 - P2V7 File (W/Att)
- 1 - RI

** Subject to Comments
on Cover sheet*

☐ UNCLASSIFIED

☐ CIA INTERNAL

☐ CONFIDENTIAL

☒ SECRET

Approved For Release 001/05/23 : CIA-RDP84B00880R00060007-4

ROUTING AND RECORD SHEET

SUBJECT: (Optional)

Radan on FE P2V-7 Aircraft

Reference:

DPD Memo 6060-59, dated 28 Sept 59

FROM: Chief, Materiel Branch

NO.

DATE

21 October 1959

TO: (Officer designation, room number, and building)

DATE

REC'D

FWD'D

OFFICER'S INITIALS

COMMENTS (Number each comment to show from whom to whom. Draw a line across column after each comment.)

1. Acting Chief, DPD-DD/P

4/1/59

5/11/59

MA

1. I concur with the recommendations contained in the basic memorandum. I want to emphasize leaving the wiring and bracketry in the aircraft for future utilization of the radan.

2. C/DB/DPD

JS

3. 25X1A

4. DB/DPD ([REDACTED])

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2. Reference paragraph 7(d), basic memo. The Materiel Branch has taken action to procure a Webcor technical representative for eventual assignment [REDACTED] as an ECM jammer technician. The request has been placed with DPD/Security.

6.

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7.

8.

1-3. Ple. mat. [REDACTED]
for [REDACTED]

9.

10.

11.

12.

13.

14.

15.

CLASSIFIED MESSAGE

Approved For Release 2001/05/23 : CIA-RDP81B00880R000100200007-4

DATE

163 LG/BM
28 AUG 59

S-E-C-R-E-T

ROUTING

1		4	
2		5	
3		6	

TO DIRECTOR

FROM [REDACTED] 25X1A

ACTION: DPD 4

INFO FE 4, DD/S, SSA, OC 6, OL 3, S/C 2, FI/D 3, FI

AUG 28 1346Z 59

ROUTINE

IN 18854

TO

DIR

INFO

[REDACTED] 25X1A

CITE

[REDACTED] 25X1A

25X1A

25X1A

1. [REDACTED] IS DISCONTINUING USE OF REMOVING AND STORING ALL P 2 V-7 PC-210

RADAN EQUIPMENT. GROUP A PARTS REMAINING PERMITTING QUICK INSTALLATION. EQUIPMENT BEING REMOVED TO REDUCE WEIGHT AND MAINTENANCE EXPENDITURES.

25X1A

2. EQUIPMENT FAILS TO OPERATE AT LOW ALTITUDES AT WHICH [REDACTED] OPERATES DUE TO DESIGN LIMITATIONS. HAVE FULL CONFIDENCE THAT OUR GPL TECHNICAL REPRESENTATIVE COULD MAKE THE EQUIPMENT WORK IF AT ALL POSSIBLE. EVERY EFFORT HAS FAILED. THE EQUIPMENT DOES WORK DURING THE FEW TIMES THE AIRCRAFT IS ABOVE MINIMUM ALTITUDE, HOWEVER OPERATORS HAVE NO CONFIDENCE IN IT AND HAVE NO WAY OF KNOWING IN ADVANCE WHEN IT IS WORKING PROPERLY.

3. ALERT HQS IMPLICATIONS TO PHOTOGRAPHIC EQUIPMENT AND RECOMMEND DISCONTINUE, PLANS FOR ASN-7 INSTALLATION.

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4. [REDACTED] GPL TECHNICAL REPRESENTATIVE IS ONLY MAINTENANCE PERSON HERE WITH ECM JAMMER EXPERIENCE. REQUEST HIS RETENTION FOR DURATION OF PRESENT CONTRACT TO MAINTAIN JAMMERS.

END OF MESSAGE

S-E-C-R-E-T

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